IN THE CLAIMS

Please amend the following claims:

- 5. 8. (canceled)
- 9. (currently amended) An optical module for coupling to an optical fiber comprising:
 - a laser for emitting light;
 - a transfer lens an optical element for transferring light emitted by the laser into the optical fiber; wherein the transfer lens an optical element includes
 - a diffractive surface that is defined by a surface function; wherein the surface function includes a first phase function that includes a first m value combined with a second phase function that includes a second m value; wherein the first m value and the second m value are selectively adjustable to control for providing favorable launch conditions and reflection management manage reflections.
- 10. (original) The optical module of claim 9 wherein the first phase function has angular symmetry; and

wherein the second phase function has radial symmetry and a cusp region with a discontinuous slope.

- 11. (currently amended) The optical module of claim 9 wherein the transfer lens optical element provides reflection management so that light reflected from the end of the optical fiber is not directed to a location at which light is emitted by the laser.
- 12. (currently amended) The optical module of claim 9 wherein the transfer lens optical element provides favorable launch conditions so that light launched into the optical fiber avoids index anomalies along the axis of the optical fiber.

- 13. (original) The optical module of claim 9 wherein the optical module is one of an optical receiver, an optical transmitter, and an optical transceiver.
- 14. (original) The optical module of claim 9 wherein the first phase function is a spiral phase function; and wherein the second phase function is a cone phase function.
- 15. (currently amended) The optical module of claim 10 14 wherein the spiral phase function can be expressed as follows:

$$\phi = m_S * \theta$$

where 'm_S' is a real number that describes how fast the phase changes as one traverses a circle about the center of the aperture; wherein ' θ ' is an angular coordinate; and

the cone phase function can be expressed as follows:

$$\phi = 2\pi m_C * \rho$$

where ' m_C ' is a real number that describes how fast the phase changes as one traverses a radial line from the center of the aperture;

wherein ' ρ ' is a normalized radial coordinate; wherein ρ is equal to 1 at the edge of the aperture, and ρ is equal to zero at the center of the aperture.

- 16. (original) The optical module of claim 15 wherein m_S is equal to =3 and m_C is equal to -2.
- 17. (original) The optical module of claim 9 further comprising: an optical surface for focusing the light onto the optical fiber; and wherein the diffractive surface receives and collimates the light originating form the laser.

- 18. (currently amended) The transfer lens optical module of claim 9 further comprising:
 - a packaging for housing the light source; wherein the diffractive surface is disposed in the housing.
- 19. (new) The optical module of claim 14 wherein the cone phase function includes a cross section that is one of a generally concave profile, a generally triangular cross-section, a generally convex profile, an inverted generally concave profile, an inverted generally triangular cross-section, and an inverted generally convex profile.
- 20. (new) The optical module of claim 15 wherein the values of m_S and m_C are selectively adjustable to control factors that include one of coupling efficiency, misalignment tolerances, and the amount of feedback.
- 21. (new) The optical module of claim 15 wherein the values of m_S and m_C are selectively adjustable to suit the requirements of a particular optical application.
- 22. (new) The optical module of claim 9 further comprising:
 - a third phase function that includes one of a lens phase function, an aberration control phase function, a prism phase function, and a grating phase function.